

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
26 May 2005 (26.05.2005)

PCT

(10) International Publication Number  
**WO 2005/048192 A1**

(51) International Patent Classification<sup>7</sup>: **G06T 5/00**

(21) International Application Number:  
PCT/GB2004/004741

(22) International Filing Date:  
10 November 2004 (10.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0326167.4 10 November 2003 (10.11.2003) GB

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(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

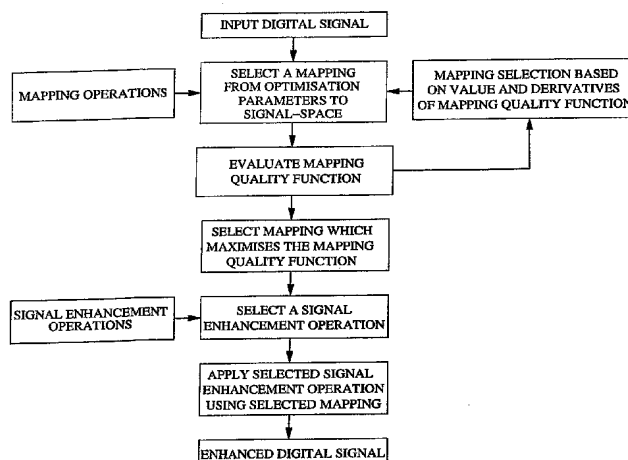
(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE,  
SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

[Continued on next page]

(54) Title: DIGITAL SIGNAL PROCESSING WITH IMPROVED MAPPING



(57) **Abstract:** A method of performing a signal enhancement operation on a digital input signal is described. The method produces a best estimate of a true signal which the digital input signal is assumed to represent. The method involves deriving a plurality of candidate mappings, each defining a mapping between the signal domain of the digital input signal and an alternative optimisation domain, each signal in the signal domain corresponding to a set of optimisation parameters in the optimisation domain. For each candidate mapping, an indicator of the quality of the candidate mapping is calculated on a set of optimisation parameters in the optimisation domain of the candidate mapping is generated, the set of optimisation parameters representing an enhanced signal in that domain. The highest-quality mapping is then selected in dependence on the calculated indicators, and the set of optimisation parameters generated for the selected mapping is selected. The selected mapping is applied to the selected set of optimisation parameters to produce an enhanced digital signal. The method finds application in a variety of signal processing fields including image processing, and is applicable for example, to image processing tasks such as image enhancement or image reconstruction.

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